Call for Change – Sustainable Watersheds

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The Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) has developed a set of recommendations believed necessary to maintain and continue to improve the water quality in the United States. This "Call for Change: Water Quality Improvement in the 21st Century" is an invitation to the Federal government to reestablish an effective partnership and forge a new course of action to protect and improve the nation's water resources. ASIWPCA looks forward to an on-going constructive dialogue with the US Environmental Protection Agency (EPA), the incoming Administration, and interested stakeholders to meet this challenge.

General Overview and Background:

The most effective management of water resources is based on a watershed scale. The appropriate scale of any activity, whether that is monitoring, or TMDLs, should be a State judgment based on the balance needed between monitoring, assessments, and project implementation. Holistic management encompasses water quantity and quality, surface water and groundwater, water withdrawal, in stream flow, wastewater discharge, and stormwater. A watershed approach allows States to effectively solve a variety of problems through project integration, rather than on a project by project basis. Further, this integration builds public trust in the watershed scale process. Multimedia impacts that are incumbent in air-land-water interactions can be considered that may affect both hydrology and water pollutant sources and dynamics and their effects on ecosystem health. Evaluation of multimedia impacts accounts for the "air-land-water" interconnection and some aspect of resulting land use management.

Downstream uses are impacted by actions upstream. This has been clearly demonstrated in the Georgia, Alabama, and Florida battles where increasing water demand in the headwaters (Atlanta area) can have negative impacts on downstream water supply, ecological flows, and the estuary biological communities. Changing flow patterns upstream can affect the assimilative capacity of downstream reaches, in turn affecting effluent requirements. The cumulative impacts of point and nonpoint pollution can only be assessed and managed on a watershed scale, either in impaired waters or in high quality waters deserving protection.

Reason for Change:

In addition to developing methodology and models to facilitate watershed-scale, multimedia management, here are three areas that need special attention:

Forestry: Recently, the EPA developed an MOU with the US Forest Service (USFS) to foster collaboration and efficiencies to maintain and restore water quality on national forest system lands. Forestry activities on USFS and Bureau of Land Management (BLM) lands, along with those on State, tribal and private lands, can and do have immense impacts on water quality and watershed health in many States.

Agriculture: States appreciate the increased attention and priority given to water quality and other environmental issues in recent farm bills. Currently, in most States, the US Department of Agriculture (USDA) manages farm bill programs entirely independent of these Clean Water Act (CWA) programs. As a result the USDA programs are frequently implemented in a non-targeted, random way that will not result in measurable improvements to watershed health. Recent energy issues have and will continue to exacerbate these issues and may, in fact, undo some of the good that has been done under the Farm Bill programs if not closely coordinated with States. Watershed approaches in the Farm Bill are needed to link Federal "conservation" funds to watershed needs. While the NRCS has allotted a scoring scheme for funding Farm Bill projects, this system is not used on a watershed basis.

Urban Development, Land Use Changes and "Green" Practices: In many areas of the country, agricultural and forested lands are being converted to urban/suburban landscapes at alarming rates. The cumulative impacts of these changes – increased impervious cover, increased water demand, wastewater effluents, non-point runoff, land cover changes, etc. – are often not assessed.

Positive changes are occurring with the growing demand for "green" technology. At Local, State and National levels, many "green development", "green product", and "green land use" initiatives and programs are coming into more prominent use as methods to promote, reward, and recognize more environmentally friendly ways to develop lands, raise crops, harvest forests, and manufacture products. Some of these programs are private efforts, such as forestry and forest products certifications and LEED certifications for buildings. Some are government led, such as low impact development programs and ordinances to reduce stormwater impacts. While helpful and laudable, unless implemented on a landscape scale these piecemeal and mostly unconnected and voluntary approaches will not result in widespread and sustainable restoration and protection of water quality and watershed health.

Multimedia Management: Many of today's most intransigent and pressing water quality problems reflect the combined insults of air, land and water pollution or modification. This is clearly evident in the effects of nitrogen deposition, which contributes to soil and water acidification and eutrophication of surface waters, to the detriment of both terrestrial and aquatic ecosystems, as well as human health. However, atmospheric sources of nitrogen compounds are not exclusively to blame. Nitrogen is also contributed by fertilizers and wastewaters. Delivery of nitrogen to surface waters is enhanced by land modification, which also disrupts natural nutrient removal capacity. This chain of integrated effects is often referred to as the nitrogen cascade, a concept which can be applied to other pollutant problems as well. It is essential that pollution problems be addressed by a coordinated watershed approach that considers the air-land-soil interactions of the problem.

Effectiveness: Implementation of TMDLs will determine the success of the program. The States are individually and collectively spending millions of dollars every year to develop TMDLs as required by the Clean Water Act and various court decrees and settlement agreements. States, local governments and other entities are spending even more money to implement them and other watershed protection initiatives. They are valuable tools to quantify pollutant loading, identify sources and determine the actions needed to meet water quality standards and restore watershed health. Implementation can be a complex and challenging undertaking over many years. The Federal proclivity for "bean counting" completed TMDLs gives a false picture of the success achieved and the improvements underway. The timeframe required for watershed

improvement and the true goal of the program — water quality improvement — are masked by the mistaken focus only on completed TMDL documents.

Recommendations:

Forestry

- States should be full partners with Federal agencies in the development and assessment of forestry strategies to protect watershed health.

- States should develop multi-agency teams in a partnership to align Farm Bill funds in a watershed approach.

Agriculture:

- States should develop multi-agency teams in a partnership to align Farm Bill funds in a watershed approach.

- The Farm Bill must become an integral partner in the nation's effort to protect water quality. EPA should start taking the leadership role among Federal agencies to protect and restore impaired waters.

    - In order to most effectively utilize the new programs and funding to meet Clean Water Act requirements, Farm Bill programs must be coordinated with TMDLs, watershed plans, and other nonpoint source pollution programs that are managed by EPA and the States.

    - The Wetlands Reserve and Conservation Reserve and Enhancement Programs in particular need special attention.

Urban Development, Land Use Changes, and "Green" Practices

- Strategies should be developed and employed to ensure that complementary programs addressing each of the major land uses are routinely and consistently implemented across the landscape.

- States should facilitate the use of watershed-scale management by highlighting good examples across the country, working with Federal agencies to research and test models and methodologies, and co-hosting workshops to discuss issues and solutions.

- States should play a role in leading discussions on how flow management, water withdrawals, and reservoir releases impact water quality and aquatic environments (in stream flow needs) and providing examples of different approaches (nationally and globally).

- States should develop a website of "green" references.

- Federal agencies should provide technical support and help facilitate solutions.

- Watershed carrying capacity needs to be identified to properly evaluate watershed management strategies,

Multimedia Management

- Water quality impairments that are caused by the interactive and cumulative effect of air-land-water insult need to be comprehensively managed accordingly. This will require a coordinated effort of multiple State and Federal programs affecting management practices for air, land and water.

Effectiveness

- States need tools, resources and performance indicators to assess the progress of TMDLs and other watershed protection activities in meeting standards and to make timely adjustments where needed. States and EPA should work together to get that accomplished. What is currently in place at the national level is woefully inadequate.

- States need models that work successfully with limited data.

- States need more and better tools and resources to implement TMDLs, including nonpoint source components.

- TMDLs are not the only tool available and should not be looked upon as such. In many cases, more efficient means of watershed improvement are open to the States and the public. Alternative approaches should be developed.

- Interim milestones, other than delisting of impaired waters, must be developed to show progress toward water quality improvement.

NOTE: *Throughout this document reference to States also refers to Interstate Water Pollution Control Agencies.*

For more information on ASIWPCA's Call for Change, go to www.asiwpca.org